REMARKS

As an initial matter, Applicant points out that the finality of the Office Action dated April 9, 2003, is premature and should be withdrawn in accordance with MPEP 706.07(d). Specifically, the finality of the April 9th Office Action is premature because the Examiner made a new grounds of rejection on claim 7 that was neither necessitated by Applicant's amendment to the claim nor based on information submitted by the Applicant in an Information Disclosure Statement (IDS). MPEP 706.07(a). In fact, the Examiner previously stated that claim 7 contained allowable subject matter (Office Action, dated August 30, 2002, page 6, lines 15-18). Applicant acknowledged the Examiner's determination (see Amendment (B), page 7, lines 2-4). In the April 9th Office Action, the Examiner rejected claim 7 implying that the subject matter is obvious (Office Action, dated April 9, 2003, page 5, line 19 to page 6, line 1). This new grounds of rejection was neither necessitated by Applicant's amendment nor based on information provided by the Applicant in an IDS; therefore, the finality is improper and should be withdrawn. MPEP 706.07 (a) and (d).

In a telephone conversation with Examiner Mike Qi on April 15th, 2003, the Examiner was made aware of this finality error. The Examiner agreed that the finality of the April 9th Office Action was improper and should be withdrawn.

Claims 7 and 17 have been canceled without prejudice. New claims 20 and 21 have been added, wherein claim 20 recites the subject matter of claim 7 in independent form and claim 21 recites the subject matter of claim 17 in independent form. Therefore, new claims 20 and 21 have the same scope as claims 7 and 17, respectively, and do not represent limiting amendments. Claims 9 and 19 have been amended so as to depend upon new claims 20 and 21 respectively.

Claims 1 and 13 have been amended to recite "wherein the second active display includes only two polarisers such that a first absorbent or reflective front polariser is arranged at the front of the display cell and in that a second back polariser, crossed with the front polariser or parallel thereto, is arranged at the back of the valve" as supported by Figure 6 and page 7, lines 23-33, of the instant specification.

The present amendment adds no new matter to the application and raises no new issues.

The Invention

The present invention pertains broadly to a display assembly, such as would be used in a timepiece, having two superposed display devices for displaying information by inverting the contrast of all or part of the information displayed between the two display devices. Specifically, in a first embodiment in accordance with the present invention, a display assembly with two superposed contrast inversion display devices is claimed that includes a first display device, a second active display device having a double structure, one structure being formed by a first contrast inversion display device provided by a liquid crystal dot matrix display cell or by a digit liquid crystal display cell, the liquid crystals of the one structure being confined in a space delimited by two transparent substrates and having two switching states, and the other structure being formed by a second contrast inversion display device provided by a liquid crystal optical valve, the liquid crystals of the other structure being confined in a space delimited by two transparent substrates and having at least two switching states and control means allowing an appropriate voltage to be selectively applied to the display cell and optionally to all or part of the valve to cause each liquid crystal to switch from one state to another, wherein a first absorbent or reflective front polariser is arranged at the front of the display cell and in that a second back polariser, crossed with the front polariser or parallel thereto, is arranged at the back of the valve so that when the display cell is switched to display at least one item of data, the total or partial switching of the valve, from one state to another, inverts the contrast of the data displayed from a light appearance to a dark appearance or vice versa, wherein the first display device has a dark shade and the back polariser is a reflective polariser, and wherein the first contrast inversion display device and the second contrast inversion display device are superposed.

In accordance with a second embodiment of the invention, a display assembly with two superposed contrast inversion display devices is claimed that includes a first display device, a second active display device having a double structure, one structure being formed by a first contrast inversion display device provided by a liquid crystal dot matrix display cell or by a digit liquid crystal display cell, the liquid crystals of the one structure being confined in a space delimited by two transparent substrates and having two switching states, and the other structure being formed by a

second contrast inversion display device provided by a liquid crystal optical valve, the liquid crystals of the other structure being confined in a space delimited by two transparent substrates and having at least two switching states and control means allowing an appropriate voltage to be selectively applied to the display cell and optionally to all or part of the valve to cause each liquid crystal to switch from one state to another, wherein the second active display includes only two polarisers such that a first absorbent or reflective front polariser is arranged at the front of the display cell and in that a second back polariser, crossed with the front polariser or parallel thereto, is arranged at the back of the valve so that when the display cell is switched to display at least one item of data, the total or partial switching of the valve, from one state to another, inverts the contrast of the data displayed from a light appearance to a dark appearance or vice versa, wherein the first display device has a light shade and the back polariser is an absorbent polariser, and wherein the first contrast inversion display device and the second contrast inversion display device are superposed.

In accordance with a third embodiment of the invention, a display assembly with two superposed contrast inversion display devices is claimed that includes a first display device, a second active display device having a double structure, one structure being formed by a first contrast inversion display device provided by a liquid crystal dot matrix display cell or by a digit liquid crystal display cell, the liquid crystals of the one structure being confined in a space delimited by two transparent substrates and having two switching states, and the other structure being formed by a second contrast inversion display device provided by a liquid crystal optical valve, the liquid crystals of the other structure being confined in a space delimited by two transparent substrates and having at least two switching states and control means allowing an appropriate voltage to be selectively applied to the display cell and optionally to all or part of the valve to cause each liquid crystal to switch from one state to another, wherein the second active display includes only two polarisers such that a first absorbent or reflective front polariser is arranged at the front of the display cell and in that a second back polariser, crossed with the front polariser or parallel thereto, is arranged at the back of the valve so that when the display cell is switched to display at least one item of data, the total or partial switching of the valve, from one state to another, inverts the contrast of the data displayed from a

light appearance to a dark appearance or vice versa, wherein the first display device has a dark shade and the back polariser is a reflective polariser, and wherein the first contrast inversion display device and the second contrast inversion display device are superposed, and the transparent substrates opposite the display cell and the valve are combined in a single transparent substrate.

In accordance with a fourth embodiment of the present invention, a display assembly with two superposed contrast inversion display devices is claimed that includes a first display device, a second active display device having a double structure, one structure being formed by a first contrast inversion display device provided by a liquid crystal dot matrix display cell or by a digit liquid crystal display cell, the liquid crystals of the one structure being confined in a space delimited by two transparent substrates and having two switching states, and the other structure being formed by a second contrast inversion display device provided by a liquid crystal optical valve, the liquid crystals of the other structure being confined in a space delimited by two transparent substrates and having at least two switching states and control means allowing an appropriate voltage to be selectively applied to the display cell and optionally to all or part of the valve to cause each liquid crystal to switch from one state to another, wherein a first absorbent or reflective front polariser is arranged at the front of the display cell and in that a second back polariser, crossed with the front polariser or parallel thereto, is arranged at the back of the valve so that when the display cell is switched to display at least one item of data, the total or partial switching of the valve, from one state to another, inverts the contrast of the data displayed from a light appearance to a dark appearance or vice versa, wherein the first display device has a light shade and the back polariser is an absorbent polariser, and wherein the first contrast inversion display device and the second contrast inversion display device are superposed, and the transparent substrates opposite the display cell and the valve are combined in a single transparent substrate.

Various other embodiments in accordance with the present invention are the subject of the dependant claims. One advantage of the embodiments in accordance with the present invention is that a display assembly, such as would be used in a timepiece, is provided that has two superposed display devices that display dark indicia on a light background or light indicia on a dark

background thereby providing an aesthetically pleasing and easy to read information display of various data, such as time data and the like.

The Rejection

Claims 1, 4, 8, 10-13, 16 and 18 stand rejected under 35 U.S.C. 103(a) as unpatentable over "Applicant's admitted prior art" (Applicant's specification, page 1, line 16 to page 5, line 2, Figure 1A). Claims 2, 3, 7, 9, 14, 15, 17 and 19 stand rejected under 35 U.S.C. 103(a) as unpatentable over Applicant's admitted prior art in view of Masafumi et al. (EP 0930522).

Applicant respectfully traverses the rejection and requests reconsideration of the application for the following reasons.

Applicant's Arguments Regarding Original Claim 7

As an initial matter, Applicant would like to address new claims 20 and 21 because they correspond to the subject matter of claims 7 and 17 written in an independent format. Applicant asserts that neither the Applicant's Admitted prior art, nor the Musafumi et al. reference teach, or even suggest, that "the transparent substrates opposite the display cell and the valve are combined in a single transparent substrate" as recited in claims 7 and 17. Applicant points out that the Examiner asserted this position also in the Office Action dated August 30, 2002, page 6, line 16, to page 7, line 8). More specifically, the Examiner stated for the record:

"The closest references <u>Applicant admitted prior art</u> and <u>EP 0930522</u>, EP 0926574...do not disclose the display structure in which the transparent substrates opposite the cell and the valve are combined in a single transparent substrate as claimed." (emphasis added).

In other words, the Examiner concluded that the prior art of record, including the Applicant's admitted prior art and the Musafumi et al. reference did not disclose the subject matter of claim 7. Now, in the Office Action dated April 9, 2003, page 5, line 19, to page 6, line 3, the Examiner states the ambiguous conclusion that

"using transparent substrates opposite the display cell and the valve are combined in a single transparent substrate that would be conventional liquid crystal display structure, because the liquid crystal display structure uses transparent substrates to form the display device, and also can be combined into a single substrate including the cell and the valve."

Clearly the April 9th Office Action is inconsistent with the August 30th Office Action. In addition, the April 9th Office Action does not point out where in the prior art the subject matter recited in claim 7 is found.

The courts have ruled that when the PTO asserts there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such teaching or suggestion appears in the reference. In re Rijckaert, 29 U.S.P.Q.2d 1955, 1957 (Fed. Cir. 1993). In addition, the courts have held that the mere fact the prior art could be modified to make the invention would not make the modification obvious unless the prior art suggested the desirability to make the modification. In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

In this case, the present record shows that the prior art does not teach the subject matter of claims 20 and 21, originally recited in claim 7, wherein "the transparent substrates opposite the display cell and the valve are combined in a single transparent substrate." Furthermore, the Examiner's conclusory statement of obviousness in the April 9th Office Action contradicts the Examiner's reasoned statement of non-obviousness in the April 30th Office Action and lacks a showing grounded in the prior art that the proposed modification of the prior art is suggested by the prior art in accordance with Gordon at 1127. This conclusory statement is insufficient to reject the claims since it does not point to any prior art or other evidence for the suggestion that the combination, which the Examiner admitted was not found in the prior art, would in fact have been obvious in view of the prior art. In other words, the Examiner has made a legal conclusion of obviousness without any factual support that the claimed modification would have been suggested in the prior art.

For these reasons, claims 20 and 21 and dependent claims 9 and 19 are allowable as unobvious over the prior art of record.

Applicant's Arguments Regarding The Admitted Prior Art

Referring now specifically to the prior art, the Applicant's specification discusses the background of the invention from page 1, line 3 to page 5, line 2. In this discussion, Applicant discusses prior art display assemblies as shown in Figures 1A, 2A, 2B and 2C. Applicant also

discusses "modifications which may be made to the display assembly of the prior art" (page 6, lines 21-22); however, the embodiments shown in Figures 3A, 3B, 4A, 4B, 5A and 5B are not admitted to be prior art or obvious to those skilled in the art. Applicant's characterization of the subject matter of Figures 3A, 3B, 4A, 4B, 5A and 5B as "modifications which may be made to the display assembly of the prior art" does not communicate that such modifications have, in fact, been made, or that they are taught by the prior art. The discussion related to Figures 3A, 3B, 4A, 4B, 5A and 5B is solely intended to point out that further modifications leading to the subject matter of the presently claimed invention would not have been obvious.

All of the embodiments shown in Figures 1A, 2A, 2B, 2C, and, non-prior art Figures 3A, 3B, 4A, 4B, 5A and 5B include a polariser (42) sandwiched between a display cell (26) and an optical valve (28). The object of the present invention is to provide a display assembly that includes two superposed display devices allowing an inversion of contrast of one of the displays without increasing energy requirement and without requiring a complex polarizer drive (present specification, page 5, lines 3-7). In other words, the presently claimed invention does not permit the presence of a polarizer or any other structure between the display cell and the optical valve.

Specifically, the instant specification defines that "[t]he actual construction of the two superposed display devices...corresponds to what was already described with reference to Fig 1A, with the exception of intermediate polariser 42 which has been omitted (page 7, lines 3-6, emphasis added)." All of the embodiments shown in Figures 6-10 show display cell (26) superposed on optical valve (28) with no polarizer disposed in between.

Applicant's use of the term "superpose" to describe the patentable relationship between the two contrast inversion display devices is adequately described in the instant specification on page 7, lines 3-6, and is consistent with the meaning of the word. Specifically, one definition of "superpose" is one upon another (Random House Webster's college dictionary, 1991, page 1341). The word "upon" communicates the positional relationship "in or into complete or approximate contact with" (Random House Webster's college dictionary, 1991, page 1456). In all of the prior art devices, a polarizer is disposed between the display cell and the optical valve. With this

structure, it is not possible for the display cell to contact, or approximately contact, the optical valve because there is a barrier (i.e., the polarizer) in between. Therefore, given (a) the above definition of "superpose," (b) the definition of "superposed display devices" described in the specification (page 7, lines 3-6) and (c) as shown in Figures 6-10, it is clear that the phrase "two superposed contrast inversion display devices" recited in claims 1 and 13 does not allow for a polarizer to be interposed between the two contrast inversion display devices.

The Examiner's reply to Applicant's arguments in Amendment (B), page 11, lines 1-21, is to acknowledge that "the invention is that the two superposed contrast inversion display device does not have a polariser disposed between the two contrast inversion display devices, and the invention uses only two polarizers" and to imply that these limitations do not exist in the claims (Office Action, April 9, 2003, page 6, line 13, to page 7, line 2). Applicant points out that the phrase "wherein the first contrast inversion display device and the second contrast inversion display device are superposed" as recited in claims 1, 13, 20 and 21, particularly points out and distinctly claims that the first contrast inversion display device and the second contrast inversion display device are disposed "one upon another" so that these two elements are "in or into complete or approximate contact with" each other as naturally falls from the dictionary definition of the term "superposed." Such a definition of the term superposed does not read on a structure that has a polarizer interposed between the two contrast inversion display devices.

Furthermore, the embodiments recited in claims 1 and 13 specify that the second active display includes only two polarisers, which is not taught, or even suggested, by the prior art of record.

To reemphasize, claims 1 and 13 both recite a "display assembly with two superposed contrast inversion display devices." None of the embodiments disclosed in Figures 1A, 2A, 2B, 2C, 3A, 3B, 4A, 4B, 5A and 5B have "two superposed contrast inversion display devices" because each of these embodiments have a polariser (42) interposed between the display cell (26) and the optical valve (28). These embodiments all have three polarizers (40), (42) and (44) with the intermediate polarizer (42) interposed between the display cell (26) and the optical valve (28),

whereas the display assembly in accordance with the present invention uses only two polarizers, neither of which is interposed between the display cell and the optical valve. Applicant asserts that there is no teaching in the EP 0926574 document disclosing, or even suggestion, that such a modification be made. If the Examiner disagrees with Applicant's interpretation of the prior art, it is the Examiner's burden to show where in the prior art the "two superposed contrast display devices" are taught, in accordance with Rijckaert at 1957, while giving a fair reading of what the prior art reference teaches as a whole in accordance with Gordon at 1127.

Applicant's Additional Comments Regarding the EP'574 Reference

Applicant makes the following additional observations and comments regarding the prior art reference EP 0 926 574 (hereafter, the "EP'574 reference"), which is discussed in the present specification on page 1, line 16, to page 3, line 27. Specifically, Applicant's specification points out that the device disclosed by the EP'574 reference operates in either an "On state" or an "Off state," which produces contrast but it does not permit inversion of the contrast. Contrast inversion involves showing the same piece of information as either light on a dark background or dark on a light background, and that the inversion is selectable. Applicants point out that while contrast inversion using inverse addressing is known (instant specification, page 3, lines 23-27), Applicant's do not admit that application of inverse addressing to the device disclosed by the EP'574 reference would be obvious. In fact, Applicant pointed out that the use of inverse addressing in the device of the EP'574 reference would create substantial increases in power requirements that would be detrimental (instant specification, page 3, lines 23-27) and that would discourage one of ordinary skill in the art from applying inverse addressing to the device disclosed in the EP'574 reference because the energy requirements are unacceptable for a timepiece.

Applicant points out that in §0021, lines 6-10, of the EP'574 reference, it is taught that display cell (28) (of the front display assembly (24) including also the backward valve (30)) is a liquid crystal cell of the twisted nematic type whose respective external surfaces of substrates (34) and (36) are provided with crossed polarizers. In other words, there is always at least one polarizer

between the cell (28) and the valve (30), which is contrary to the structure of the present invention wherein there are no polarizers between these elements.

In addition, §0037, lines 3-6, of the EP'574 reference teaches that the optical valve (30) can be formed by a switchable reflector, including, starting from the side of crystal (22), a stack formed of a polarizer, a liquid crystal cell of the twisted nematic type (TN), and a quarter wave plate and a cholesteric film (acting together like a polarizer). Thus, the front assembly (24) described by the EP'574 reference is the same type as that shown in Figures 2A and 2B of the present application.

In summary, the EP'574 reference does not disclose, or even suggest, a "display assembly with two superposed contrast inversion display devices" as recited in claims 1, 13, 20, and 21, wherein the "second active display includes only two polarisers" as recited in claims 1 and 13, and contrast inversion as recited in claim 15.

Applicant's Arguments Regarding The Masafumi et al. Reference

The Masafumi et al. reference discloses a "liquid crystal display" device comprising a first liquid crystal cell (16) and a second liquid crystal cell (18), made up of a liquid crystal layer sealed in a gap between a pair of transparent substrates having an electrode formed on each of the inner surfaces thereof, facing each other and disposed in that order from the visible side, with an absorption-type polarizing film (12) disposed on the visible side of the first liquid crystal cell (16) and a reflection-type polarizing film (14) disposed on a side of the second liquid crystal cell (18), see Abstract. However, the display device disclosed by Masafumi et al. does not teach, or even suggest a "display assembly with two superposed contrast inversion display devices" as recited in claims 1, 13, 20 and 21. In fact, the Masafumi et al. reference teaches that the first liquid crystal display cell (16) and the second liquid crystal cell (18) are disposed such that the display regions of the respective liquid crystal cells are "superimposed" on each other (col. 5, lines 6-10). As shown in Figure 1, these structures are not "superposed" cells in accordance with the present invention because there is nothing in the reference to teach, or even suggest, that they are in contact or in approximate

contact with one another. As suggested by Figure 1, Masafumi et al. schematically illustrate that cells (16) and (18) are separated from each other and not in contact or in approximate contact.

In addition, the Masafumi et al. reference teaches that "a conventional liquid crystal display panel used in electronic equipment other than a timepiece" can include an "inverse mode" (col. 1, line 58, to col. 2, line 22) and describes the operation of the "inverse mode" that those skilled in the art would recognize as the "inverse addressing" referred to in the present specification (page 3, lines 20-27). In accordance with the discussion of inverse addressing in the present specification, Masafumi et al. also point out that the "inverse mode" is not suitable for portable devices such as timepieces. Consequently, the Masafumi et al. reference stands in support of the proposition that those skilled in the art would not apply inverse addressing to a timepiece.

Conclusion

Applicant has shown that the rejection under 35 U.S.C. 103 of claims 1-4 and 7-12 as unpatentable over Applicant's Prior Art discussion is untenable and should be withdrawn because none of the prior art display assemblies, or modifications thereof, include or even suggest "a display assembly with two superposed contrast inversion display devices" as recited in claims 1, 13, 20 and 21. In addition, the Masafumi et al. reference does not make up this deficiency. Furthermore, the rejection against claims 20 and 21 is untenable and should be withdrawn because none of the prior art references teach, or even suggest, the feature wherein the "transparent substrates opposite the display cell and the valve are combined in a single transparent substrate."

For all of the above reasons, claims 1-4, 8-16 and 19-21 are in condition for allowance and a prompt notice of allowance is earnestly solicited.

Questions are welcomed by the below signed attorney of record for the Applicant.

Respectfully submitted,

GRIFFIN & SZIPL, PC

Joerg-Uwe Szip Reg. No. 31, 79

GRIFFIN & SZIPL, PC Suite PH-1 2300 Ninth Street, South Arlington, VA 22204 Telephone: (703) 979-5700 Facsimile: (703) 979-7429

Customer No.: 24203

Please file with
Amendment (c)

Copyright © 1991 by Random House, Inc.

All rights reserved under International and Pan-American Copyright Conventions. No part of this publication may be reproduced in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from the publisher. All inquiries should be addressed to Reference Department. Random House, Inc., 201 E. 50th St., New York, NY 10022. Published in the United States by Random House, Inc., New York, and simultaneously in Canada by Random House of Canada Limited, Toronto.

Random House Living Dictionary Project is a trademark of Random House, Inc.

Library of Congress Cataloging-in-Publication Data

Random House Webster's college dictionary.

ISBN 0-679-40110-5; ISBN 0-679-40100-8

1. English language—Dictionaries. 90-21963 423-dc20 PE1628.W55185 1990

A number of entered words which we have reason to believe constitute trademarks have been designated as such. However, no attempt has been made to designate as trademarks or service marks all words or terms in which proprietary rights might exist. The inclusion, exclusion, or definition of a word or term is not intended to affect, or to express a judgment on, the validity or legal status of the word or term as a trademark, service mark, or other proprietary term.

International Phonetic Alphabet, courtesy International Phonetic Association

Random House Publications are available at special discounts for corporate use. in bulk purchases of 100 copies or more for promotions or premiums. Special editions, including personalized covers and corporate imprints, can be created in large quantities for special needs. For more information, write to the Director of Special Markets, Random House, Inc., 201 E. 50th Street, New York, N.Y. 10022.

Manufactured in the United States of America

r.o/sr

1341

のけるというないというなとなるとなるとはなるとなってあるとなっているとは、なななないと

1825-35] large, good,

the part of life by of behavior JPER-, EGO] 5). [1885.

ting to do plp. of suogare to pay on, n. - au

1. qoing be d or needed: Biol. a cate.

751 bet, esp. on Hishers in ex-

n, the fertiin by succesif an ovum in .perfētā(re) to to breed, der

of the surface: r than real: and only wha thorough. \$ Hace: superfl -uperficiālis = ty (-ē al/i lē).

1. the surface distinguished SUPER. + 4.

a texture: 80 ung an identi-In that distin-

ss flow, high nelium below iu-id/i-ty, n of being su something 🕮 < L super

15 Sufficient or possessing or 1400-50; late fluere to flow,

ibs. to pour. over = super sem of galan

.. consisting of 501 star, hundred

ang, or pl. vi or typographic

etric theory of reat-ed. -he d of superheat n temperature mation of but with water b As pressure in and [1855-60]

(Z'), -he-lixes i, adj. in children pordinary, des supper-het-er-o-dyne (soo/per het/er e din/), adj. 1. noting or per-taining to a method of receiving radio signals in which the heterodyne process is used to lower the frequency of an incoming modulated wave and the wave is then amplified and demodulated. —n. 2. a superhetero-

Ø,

ind the wave is then amplified and demodulated. —n. 2. a superheterognet receiver. [1920–25: super(sonic) + μετεκουνίε] wyper-high fre-quency (sδσ/por hi/), n. any radio frequency between 3000 and 30,000 megahertz. Abbr.: SHF [1940–45] wyper-high-way (sδσ/por hi/wā/, n. a highway designed for travel at high speeds, having more than one lane for each decidion of traffic: expressway. [1920–25, Amer.]

pglon of units, expressway. [1920-29, Amer.]
ppgr-hu-man (soo/per hyōo/man; often -yōo/-), adj. 1. above or beyord what is human; having a higher nature or greater powers than humans have: a superhuman being. 2. exceeding ordinary human power,
wherement, experience, etc.: a superhuman effort. [1625-35; < NL superhumanumess. n —su/per-hu-mani-ty (-man/i tē), su/hu/manumess. n —su/per-hu/manumess. v r-hu/man-ness, n. —su/per-hu/man-ly, adv.

per-im-pose (soc)-per im poz/), v.t., -posed, -pos-ing. 1. to impose, pace, or set over, above, or on something else. 2. to put or join as an addition (usu. fol. by on or upon). [1785-95] —su/per-im/po-si/tion (-pe zish/en), n.

(pa ziśreśn, m. paper-in-cum-bent (söö/per in kum/bent), adj. 1. lying or resting on smething else. 2. situated above; overhanging. 3. exerted from above. (1655-65; < L superincumbent, s. of superincumbens, prp. of su-

[1655-65: < L superincumbent, s. ol superincumbëns, prp. of superincumbere to lean over; see super-, INCUMBENT] —su/per-in-cum/bence, su/per-in-cum/bence, su/per-in-cum/bence, su/per-in-duce (soo/par in doos/, -dyoos/), v.t., -duced, -duc-ing, to hig in as an added feature, circumstance, etc. [1545-55: < L superindicere See super-, INDUCE] —su/per-in-duc/tion (-duk/shan), n.

pper-in-fec-tion (soo/per in fek/shen), n. infection by a parasitic mi-morganism during treatment for another infection. [1920–25] pper-in-tend (soo/per in tend/, soo/prin-), v.t., -tend-ed, -tend-ing.

1. to oversee and direct (work, processes, etc.). 2. to exercise supervi-

son over (an institution, district, place, etc.). [1605-15; < LL superinundere. See super-, INTEND] paperintendiency (soo per in ten/den se, soo prin-), n., pl. -cies.
La district or place under a superintendent. 2. the position of a superintendent. 3. Also, su'per-in-tend/ence, the act or process of superintendent.

intendent. 3. Also, su'per-in-tend'ence, the act or process of superin-rending. [1590-1600; < ML superintendentia; see superintend.-ENCY] super-in-tend-ent (soo'per in ten'dent, soo'prin-), n. 1. a person who ensees or directs some work, establishment, district, etc.; supervisor. 2 a person who is in charge of maintenance and repairs of an apart-ment house; custodian. —adj. 3. superintending. [1545-55; < ML su-perintendent-, s. of superintendens, prp. of superintendere to superin-tendent-

printendent-, s. of superintendens, prp. of superintendere to superintendent-, superintende

prior/ity com/plex, n. an exaggerated feeling of one's own super-

THE CHARLES THE PROPERTY OF TH

superlative.

superlative.

superlative (sa pūr/lə tiv, soō-), adj. 1. of the highest kind or order.

do designating the highest degree of comparison of adjectives and

superlative (sa pūr/lə tiv, soō-), adj. 1. of the highest kind or order.

do designating the highest degree of comparison of adjectives and

superlative do show the extreme or greatest in quality, quantity, or in
superlative, the superlative formation of the superlative degree; acme.

1. a lie superlative degree. b. the superlative form of an adjective or

superlative degree. b. the superlative form of an adjective or

superlative formation of the superlatives.

1. superlative or superlative formation of the superlatives.

1. superlative formation or superlative-ness.

1. superlative formation or superlative-ness.

1. superlative formation or superlative-ness.

1. superlative formation or beyond the moon.

2. celestial, rather than earthly. [1605
1605
1605
1606160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607160716071607 **orl.** superlative.

risual (soo'par man'), n., pl. -men. 1. a person of extraordinary perhuman powers. 2. an ideal superior being conceived by Niese as aliance by Niese as aliance being conceived by Niese as aliance by Niese as aliance being conceived by Niese as aliance by Niese a saltaining happiness and dominance through creativity and in s allaining happiness and dominance through creativity and a some who prevails by virtue of being a ruthless egoist of superior strength, cunning, and force of will. [1900-05; trans. of G Übermensch] — Usago. See -MAN.

Su-per-mar-ket (soo'per mar'kit), n. 1. a large self-service retail store that sells food and other household goods. 2. any business or company offering an unusually wide range of goods or services: a financial supermarket. [1920-25, Amer.]

Supper-nal (soo pur/nl), adj. 1. heavenly, celestial, or divine. 2. lofty; of more than human excellence, powers, etc. 3. being on high or in the sky or visible heavens. [1475–85; < MF < L supern(us) upper + -ālis -aL'] -su∙per/nal•ly, *adv*

Supernatant (soo per nat/nt), adj. floating above or on the surface. [1655-65; < L supernatant., s. of supernatans, prp. of supernatare to swim above. See Super. NATANT]

swiper-na-tion-al (505/per nash/a nl). adj. tending to involve, or extending authority over, more than one nation; international. [1910-15] _su/per-na/tion-al-ism, n. —su/per-na/tion-al-ly, adv.

supper-nartion-ai-ism, n.—surper-nartion-ai-iy, adv.
supper-natu-ral (sōo/per nach/er el. -nach/er), adj. 1. of, pertaining to, or being above or beyond what is natural or explainable by natural law. 2. of, pertaining to, or attributed to God or a delty. 3. of a superlative degree; preternatural. 4. pertaining to or attributed to ghosts, gobtive degree; preternatural. **4.** pertaining to or attributed to ghosts, goplins, or other unearthly beings; eerie; occult. —n. **5.** a being, place, object, occurrence, etc., considered as supernatural or of supernatural origin. **6.** the **supernatural**, **a.** supernatural beings, behavior, and occurrences collectively. **b.** supernatural forces and the supernatural plane of existence. [1520-30] < ML supernatūrālis. See SUPER-, NATURAL]—au/par-nat/u-ral-ly, adv. —su/par-nat/u-ral-ness, n. —Syn. See

miraculous.

su-per-nat-u-ral-ism (sōō/per nach/er ə liz/əm. -nach/ra-), n. 1. su-pernatural character or agency. 2. belief in the doctrine of supernatural or divine agency as manifested in the world. [1790-1800] —su/per-nat/u-ral-is/tic, adj.

su-per-nor-mal (sōō/per nōr/mal), adj. 1. in excess of the normal or average. 2. lying beyond normal or natural powers of comprehension. [1865-70] —su/per-nor-mal/i-ty, n. —su/per-nor/mal-iy, adv.

Su-per-no-va (soo/per no-va), n., pl. -vas, -vae (-vê). a nova millions of times brighter than the sun. [1925–30]

times brighter than the sun. [1925–30] Su-per-nu-mer-ar-y (soo per noo me rer/ē. -nyō/-), adj., n., pl. -ar-ies. —adj. 1. being in excess of the usual, proper, or prescribed number; additional; extra. 2. associated with a regular body or staff as an assistant or substitute in case of necessity. —n. 3. a supernumerary or extra person or thing. 4. a supernumerary official or employee. 5. a person who appears in a play, opera, etc., without speaking lines or as part of a crowd; extra. [1595–1605; < LL supernumerārius. See supernumerary.]

Su-per-or-der (soo/per or/der), *n. Biol.* a category of related orders within a class or subclass. [1885–90]

su-per-or-di-nate (adj., n. soo/per ôr/dn it; v. -āt/), adj., n., v., -nat-ed, su-per-or-di-nate (adj., n. sōo'per ôr'din it; ν. -āt'), adj., n., ν., -nat-ed, -nat-ing. —adj. 1. of higher degree in condition or rank. —n. 2. a su-perordinate person or thing. 3. a word that denotes a general class under which a set of subcategories is subsumed: Child is the superordinate of girl and boy. Compare нΥΡΟΝΥΜ. —ν.l. 4. to elevate to superordinate position. [1610-20; super- + (sub)orbinate]
su-per-or-gan-ic (sōo'per ôr gan'ik), adj. of or pertaining to the structure of cultural elements within society conceived as independent of and superior to the individual members of society. [1860-65]
su-per-ov-u-late (sōo'per ov/va lāt' -ō/va-), vi -lat-ad--lating (of

superior to the individual members of society. [1860–65]

Su-per-ov-u-late (söö/per ov/yə lät/, -ö/yə-), v.i., -lat-ed, -lat-ing. (of humans, domestic animals, etc.) to produce more than the normal number of ova at one time. [1960–65] —su/per-ov/u-la/tion, n. su-per-ox-ide (söö/per ok/sid, -sid), n. a compound containing the univalent ion O, [1840–50]

su-per-pa-tri-ot (söö/per pā/trē ət, söö/per pā/-; esp. Brit. -pa/-, -pa/-), n. a person who is patriotic to an extreme. [1915–20] —su/per-pa/triot/ice.liv. adv. —su/ger-pa/triot/ice.liv. adv. —su/ger-pa/triot/ice.liv. adv. —su/ger-pa/triot/ice.liv. adv. —su/ger-pa/triot/ice.liv. adv. —su/ger-pa/triot/ice.liv.adv. ot/ic (-ol/ik), adj. —su/per-pa/tri-ot/i-cal-ly, adv. —su/per-pa/tri-otism. n

su-per-phos-phate (soo/par fos/fāt), n. 1. a mixture of calcium acid phosphate and calcium sulfate, used chiefly as a fertilizer. 2. a mixture prepared with phosphoric acid and containing about 45 percent of soluble phosphates, used as a fertilizer. [1790–1800] su-per-phy-lum (soo/per fi/lem), n., pl. -la (-le). Biol. a category of re

lated phyla within a kingdom. **su-per-phys-i-cal** (soo/per fiz/i kal), adj. above or beyond what is physical; hyperphysical. [1595–1605]

physical; hyperphysical. [1595–1605] **su-per-plas-tic** (soo) par plas/tik), adj. (of some metals and alloys) having the capacity to undergo extreme deformation at high temperatures. [1945–50] —**su/per-plas-tic/i-ty** (-tis/1 te), n. **su-per-pose** (soo) par poz/), v.t., -posed, -pos-ing. 1. to place above or upon something else, or one upon another. 2. Geom. to place (one figure) in the space occupied by another, so that the two figures coincide throughout their whole extent. [1815–25; < f superposer. See superposer. See superposer.] —**su/per-pos-a-ble**, adj. **su-per-po-si-tion** (soo/per pe zish/en), n. the order in which sedimen-

su-per-po-si-tion (soo/per per zish/en), n, the order in which sedimentary strata are s strata are superposed one above another. [1790-1800; < F: see

super-Position]

super-pow-er (soo/par pou/ar), n. 1. a very powerful nation, esp. one with significant interests and influence outside its own region. 2. power greater in scope or magnitude than that which is considered natural or has previously existed. 3. power, esp. mechanical or electric power, on an extremely large scale secured by the linking together of a number of separate power systems. [1940-45] —su/per-pow/ered, adj.

su-per-sat-u-rate (soo/per sach/a rat/), v.t., -rat-ed, -rat-ing, to increase the concentration of (a solution) beyond saturation; saturate abnormally. [1750-60] —su/per-sat/u-rat/ion, n.

su-per-saur (soo/par sor/), n. a huge sauropod dinosaur of the genus

with fine / v.t. - fined, -fin-ing-ter fine / adj. with fine / ment. n. with / adj. n cral, adj.

su'per-safe', adj : -ly, adv. -ness, n. su'per-safe/ty, n su'per-sales'man, n , pl -men. su/per-sales/man-ship/, n su/per-school/, n

su'per-screen', n., adj. su'per-sell', n su'per-sell'er, n. su'per-sen-si-ti-za'tion, n su'per-sen/si-tize/, i.l., -ized.

su/per-sen/si-tiz/er, n. su/per-se/ries, n., pl -ries. su/per-sharp/, adj su/per-size/ // su'per-sized', adj su'per-sleuth', n

up-hill (adv., adj. up/hil/; n. up/hil/), adv. 1. up or as if up the slope of a hill or other incline; upward: The soldiers marched uphill. —adj. 2. going or tending upward on or as if on a hill: an uphill road. 3. at a high place or point: an uphill village. 4. laboriously disligning or difficult: an

pace or point, an uprin vinage, 4, abortously tarigining or difficult: an uprin struggle. —n. 5, a rising terrain; ascent. (1540-50) uprinoid (up höld!), v.f., -held, -hold-ing, 1, to support or defend, as against opposition or criticism, to uphold the lamily's good name. 2, to keep up or keep from sinking; support, 3, to lift upward; raise. [1175-_up·hold/er, n.

up-hol-ster (up höl/stər, ə pöl/-), v.t., -stered, -ster-ing, to provide (chairs, solas, etc.) with coverings, custions, stuffing, springs, etc. [1850-55, Amer.; back formation from uphotsterer]

up-hol-ster-er (up höl/ster a), a pöl/-), n, a person whose business it is to upholster furniture. [1605-15; earlier upholster in same sense (see

up-hol/stery (up hol/ste rê, -strê, e pōl/-), n., pl. -ster-ies. 1. the materials used to cushion and cover furniture. 2. the business of an up-holsterer. [1640–50]

UPI or U.P.I., United Press International.

up-keep (up/kep/), n. 1. the maintenance, repairs, etc., necessary for the proper functioning of a machine, building, household, etc. 2. the cost of this: Upkeep is one quarter of our budget. [1880-85]

up-land (up/land, -land/), n. 1. land elevated above other land. 2. the **up-land** (up/land, -land/), *n*. **1**. land elevated above other land. **2**. the higher ground of a region or district; an elevated region. **3**. land above the level where water flows or where flooding occurs. —adj. **4**, of or pertaining to uplands or elevated regions. [1560-70] **up/land cot/ton**, *n*. a cotton plant, *Gossypium hirsutum*, of warm regions of the New World, that is the chief commercial cotton crop in the up of 10, 20. Apper 1.

ii\$ 11810-20, Amer.1

up/land sand/piper, n. a short-billed North American sandpiper, Bartramia longicauda, of grasslands and cultivated fields. [1825-35,

up-lift (v. up lift!) n. up/lift!), v., -lift-ed, -lift-ing, n.

up-light (up/lit/), n. a lamp, often a light bulb set in a cylinder or other ainer, whose light is directed upward. [1980-85]

wp-link (up/lingk/), n. a transmission path for data or other signals from an earth station to a communications satellite. [1965-70]

up-load (up/lod/), v.t., -load-ed, -load-ing, to transfer (software or data) from a smaller to a larger computer. [1975-80]

up-man-ship (up/man ship/), n. ONE-UPMANSHIP. [1960-65]

up-mar-ket (up/mar/kit), adj. appealing or catering to high-income consumers; upscale: upmarket fashions. [1970-75]

up-most (up'mōst'), *adj.* uppermost. [1550–60] **U-po-lu** (ỡ̄o pō/lōō), *n.* an island in Western Samoa, in the S Pacific.

Uponus (up/most/), ag. Uperimost. (1330-00)

Hpolu (50 pō/lōn), n. an island in Western Samoa, in the 5 Pacific.

114,980; 430 sq. mi. (1113 sq. km). Cap.: Apia.

Upon (a pon/, a pōn/), prep. 1. up and on; upward so as to get or be on: She climbed upon her horse. 2. in an elevated position on: a flag upon the roof. 3. in or into complete or approximate contact with: The enemy was upon us. The holidays will soon be upon us. 4. on the occasion of, at the time of, or immediately after: She was joyful upon seeing her child take his first steps. 5. on (in any of various senses, used as an entiplated of on with payadded thea of as yellong the payadded the payadded the payadded thea of as yellong the payadded the payadded thea of as yellong the payadded the payadded thea of as yellong the payadded the paya equivalent of on with no added idea of ascent or elevation, and preferred in certain cases only for euphonic or metrical reasons). [1150-1200]

un certain cases only for euphonic or metrical reasons). [1150-1200]

up-per¹ (up²ar), adj. 1. higher, as in place, position, pitch, or in a scale;
the upper stories of a house; the upper register of a singer's voice. 2.
superior, as in rank, dignity, or station. 3. (of places) at a higher level,
more northerly, or farther from the sea: upper New York State. 4. (often
ap), denoting a later division of a geologic period, system, or the like;
the Upper Devonian. —n. 5. the part of a shoe or boot above the sole
comprising the quarter, vamp, counter, and lining. 6. an upper berth. 7.
Usu., uppers. a. an upper dental plate. b. an upper tooth. —Idiom. 8.
on one's uppers, Informal. poor; without means. [1300-50; ME; see up
add].), text) (adj.), -er*)

up•per² (up•er), n. Slang. a stimulant drug, esp. an amphetamine. [1965–70, Amer.; up + -ER¹]

up/per at/mosphere, n. the portion of the atmosphere above the posphere. [1890-95]

Up/per Can/ada, n. a former British province in Canada 1791-1840: the S part of Ontario province

up/per case/, n. See under case2 (def. 8). [1675-85]

up-per-case (up'er kās'), adj., v., -cased, -cas-ing, n. —adj. 1. (of an alphabetical character) capital. 2. pertaining to or belonging in the upper a capital letter. Compare Lowercast. [1730-40]

up/per cham/ber, n. UPPER HOUSE

e ıt. 5)

"per cham'ber, n. uper House. Up/per Chinook, n. See under Chinook (def. Ic). Up/per Chinook, n. See under Chinook (def. Ic). Up/per class/, n. a class of people above the middle class, characterized by wealth and social prestige. [1830-40] —up/per-class/, adj. Up-per-class/, adj. Up-per-class-man (up/or klas/man, -klas/-), n., pl. -men. a junior or senior in a secondary school or college. [1870-75, Amer.] —Usage.

See -MAN.

per crust, n. Informal. the highest social class. [1830-35]

Depercut (up/or kut/), n., v., -cut, -cut-ting. —n. 1. a swinging blow directed upward, as to an adversary's chin. —v.t. 2. to strike (an opponent) with an uppercut. —v.t. 3. to deliver an uppercut. [1840-50]

pper Dar/by, n. a town in SE Pennsylvania, near Philadelphia.

per hand, n. the dominating or controlling position; advantage Per house, n. one of two branches of a legislature, generally smaller and less representative than the lower branch. [1525–35]

maller and less representative than the lower branch. [1525-35] **[IP/Per Ital/ian**, n. the group of Italian dialects spoken in N Italy bove a line running irregularly from the vicinity of La Spezia on the W Coast oa point below Rimini on the E coast.

per-most (up/or most/), adj. Also, upmost. 1. highest in place, or-

der, rank, power, etc. 2. topmost; predominant: a subject of uppermost -adv. 3. in or into the uppermost place, rank, or predomiconcern. —adv. 3 nance. [1475-85]

Up/per Palat/inate, n. See under Palatinate (del. 1).

Up/per Paleolith/ic, n. See under Paleolithic

up/per par/tial tone/, n. overtone (def. 1). [1875-80]
Up/per Penin/sula, n. the peninsula between takes Superior and Michigan constituting the N part of Michigan. Also called Up/per Mich/... igan.

Up/per Tungu/ska, n. See under Tunguska

Up/per Vol/ta, n. former name of Burkina Faso Up/per Vol/tan,

up-pish (up/ish), adj. Informal. UPPITY. [1670-80] - up/pish-ly, adv

up-pi-ty (up/i tē), adj. Informal. inclined to be haughty, snobbish, or arrogant. [1875–80, Amer.; prob. up + -ity, extended form of $-\mathbf{v}^i$; cf. per-Nickety] —**up/pi-ty-ness**, n.

Upp-sa-la or Up-sa-la (up/sä la, -sa-, ŏop/-), n. a city in Sf. Sweden.

up' quark/, n. the quark having electric charge % times the electron's charge and together with the down quark being a constituent of nucleons. [1975–80]

up-raise (up raz/), v.t., -raised, -rais-ing. to raise up; lift or elevate. [1250-1300]

up-rear (up retr'), ν_c -reared, -rear-ing, $-\nu_c t$. 1. to raise up; lift. 2. to build, erect. 3. to elevate the dignity of; exalt. 4. to bring up; rear. $-\nu_c t$. 5. to rise. [1250–1300]

5. to rise. [1230-1300] up-right (up/rit/, up rit/), adj., n., adv., v., -right-ed, -right-ing. —adj. 1. erect or vertical, as in position or posture. 2. raised or directed vertically or upward. 3. adhering to rectifude: righteous, honest, or just. 4, being in accord with what is right. —n. 5. the state of being upright or vertical. As complifing standing erect or vertical, as a piece of limber. 7. being in accord with what is right. — 1. 3. He shall of supervival. 6. something standing erect or vertical, as a piece of timber. 7. Usu., uprights, goalposts, as on a football field. 8. an upright piano. —adv. 9. in an upright position or direction. —v.t. 10. to make upright. [bef. 900] —up/right/ly, adv. —up/right/ness, n.

up/right pian/o, n. a piano with an upright rectangular body and with

up-right plan(σ), n, a plan with an diplight recently grunning vertically. **up-rise** (ν , up-rize), ν , up-rize, ν , up-rise (ν , up-rize), ν , up-rise (ν), up-rise

up-ris-ing (up/ri/zing, up ri/zing), n. 1, an insurrection or revolt. 2, an act of rising up. 3, an ascent or acclivity. [1200–50] **up-riv-er** (up/riv/er), adv, adj, in the direction of or nearer the source

of a river. [1830-40]

of a river. [1830-40]

up-roar (up/rôr/, -rôr/), n. 1. a state of violent and noisy disturbance, as of a multitude; turmoil. 2. an instance of this. [1520-30; < D oproer revolt, turmult, trans. of G Aufruhr; sense and sp. influenced by Roar]

up-roar-i-ous (up rôr/ē as, -rôr/-), adj. 1. characterized by or in a state of uproar; turmultuous. 2. making an uproar: confused and noisy. 3. very funny, as a person or situation. 4. very loud. as sounds or utterances. 5. expressed by or producing uproar. [1810-20] —up-roar/i-ous-ly, adv. —up-roar/i-ous-noss, n.

up-root (up root/, -root/), v, -root-ed, -root-ing. —v.t. 1. to pull out by or as if by the roots. 2. to destroy or eradicate as if by pulling out roots. 3. to displace or remove violently, as from a home, country, customs, or way of life. —v.i. 4. to become uprooted. [1610–20]

up-rose (up roz/), v. pt. of uprise.

up-rouse (up rouz), v.t., -roused, -rous-ing. to arouse. [1805-15] up-roush (up roush), n. 1. an upward rush, as of water or air. 2. an abrupt increase. [1870-75]

UPS, Trademark. United Parcel Service.

up-sa-dai-sy (up/sə dā/zē), interj. upsy-DAISY.

Up-sa-la (up/sā la, sə-, ŏ̄p/-), n. UppsaLa.

ups' and downs', n.pl. rises and falls of fortune; good and bad times.

(1930–30) **up-scale** (up-skāl/), *adj*. of, for, or designating people at the upper end of a social or economic scale. [1970–75, *Amer*.]

of a social or economic scale. [1970–75, Amer.]

up-set (v., adj. up set'; n. up/set'), v., -set, -set-ting, n., adj. —v.t. 1.
to overtum: to upset a glass of milk. 2. to disturb mentally or emotionally; distress: The accident upset her. 3. to disturb completely: throw into disorder: to upset a plan. 4. to disturb physically: The food upset his stomach. 5. to defeat (an opponent that is favored), as in politics or sports. —v.i. 6. to become upset or overturned. —n. 7, an upsetting or instance of being upset; overtum; overthrow. 8. the unexpected defeat of an opponent that is favored. 9. a nervous, irritable state of mind. 10. a disturbance or disorder. —adj. 11. overturned. 12. disordered; disorganized. 13. distressed; disturbed. 14. Archaic. raised up. [1300–50]—up-set/ter, n. up-set/ter, n.

—up-set/ter, n. the lowest price at which a person is permitted to bid for something being sold at auction. [1805–15]
up-shift (up/shift/), v.t., -shift-ed, -shift-ing, to shift (an automotive transmission or vehicle) into a higher gear. [1950–55]
up-shot (up/shot/), n. 1. the final outcome; conclusion; result: The up-shot of the disagreement was that they broke up the partnership. 2. the gist, as of an argument or thesis. [1525–35]
up-side (up/shif/), n. 1. the upper side or part 2, an upward trend as

up-side (up/sid/), n. 1. the upper side or part. 2. an upward trend. as in stock prices. [1605-15]

in stock prices. [1603–15]

up/side down/, adv. 1. with the upper part undermost. 2. in or into complete disorder; topsy-turvy: to turn the house upside down. [1300–50; re-formation (see upside) of ME upsedoun, earlier up so down (see up-so'), powh'; sense of so obscure)]—up/side-down/, adj.

up/side-down/ cake/, n. a cake that is baked on a layer of fruit, then the stops reside so that the fruit is on top. 11920–25. Amer.]

turned before serving so that the fruit is on top. [1920-25, Amer.]

PRONUNCIATION KEY: act, cape, dare, part; set, even; if, ice; ox, no, for, oil, book, bot. out; up, urge; thid; sing; shoe; thin, that; th in treasure, a = a in alone, e in item, i in easily, o in gallop, u in circus; * in fire (fi*t), hour (ou*t).